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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/092,746

03/07/2002

Robert D. Feldman

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02/25/2005

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EXAMINER

WANG, QUAN ZHEN

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 02/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,746

Applicant(s)

FELDMAN ET AL.

Examiner

Quan-Zhen Wang

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Maddocks et al. (U.S. Patent US 6,483,616 B1).

Regarding claims 1 and 10, Maddocks teaches a method, comprising: detecting loss (column 2, lines 63-67 and column 3, lines 1-15) of a supervisory signal counter-propagating in an optical fiber path (the drawing, optical fiber 6) at a first network element (the drawing, unit 2) reducing the power level (column 3, lines 7-12) of an optical signal propagating in an optical transmission line (the drawing, optical fiber 5) in response to the absence of a counter-propagating supervisory signal (column 3, lines 6-12).

Regarding claim 2, Maddocks further teaches that the step of reducing counter-propagating optical power in response to the absence of the optical signal (column 3, lines 6-12).

Regarding claim 3, Maddocks further teaches that the step of reducing the power level of the optical signal and the step of reducing counter-propagating optical power are performed substantially at the same time (column 2, lines 63-67 and column 3, lines 1-12).

Regarding claims 4, the method of Maddocks inherently comprises reducing pump power supplied by at least one pump source (the light signal generated by amplifier 8) coupled to the optical transmission line (the drawing, optical fiber 7).

Regarding claim 5, the method of Maddocks inherently comprises reducing counter-propagating pump power supplied by at least one pump source coupled to the optical transmission line (column 2, line 67 and column 3, lines 1-12).

Regarding claims 6-7, Maddocks further teaches that the power level of the optical signal is reduced by a predetermined amount such that harm from an optical signal emanating from a fault in the optical transmission line is substantially reduced (column 3, lines 13-17).

Regarding claims 8-9, Maddocks further teaches that the method further comprising the step of restoring the power level of the optical signal in response to the presence or a notification of the presence of the counter-propagating supervisory signal (column 3, lines 49-58).

Regarding claims 11-12, Maddocks further teaches the method further comprising: detecting loss of the optical signal propagating in the optical fiber path at a second network element (the drawing, unit 1); and responsive to the loss of the optical signal, reducing counter-propagating optical power (the drawing, laser control 21) output

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from the second network element (the drawing, unit 1) by a predetermined amount, and the steps are performed substantially at the same time (column 3, lines 7-12).

Regarding claims 13-14, the method of Maddocks inherently comprises reducing pump power supplied by at least one pump source coupled to the optical fiber path in the first network element; reducing counter-propagating optical power comprises reducing counter-propagating pump power supplied by at least one pump source coupled to the optical transmission line (column 3, lines 12-35).

Regarding claim 15, Maddocks further teaches the method further comprising reducing counter-propagating pump power supplied by at least one pump source coupled to the optical fiber path in the second network element (column 3, lines 14-16).

Regarding claim 16, Maddocks teaches a network element adapted for use in an optical transmission system, comprising: at least one gain element (the drawing, amplifier 8), for providing an optical signal to an optical transmission line (the drawing, optical fiber 5); and a controller (the drawing, Laser Control 21), for reducing the power level of an optical signal generated by the at least one gain element in response to the absence of a counter-propagating supervisory signal (column 3, lines 7-12).

Regarding claim 17, Maddocks further teaches that the controller (the drawing, laser control 21), in response to the absence of the counter-propagating supervisory signal (supervisory signal output by supervisory insert 16), provides an indication to a downstream network element (the drawing, unit 2) that the supervisory signal is absent (column 3, lines 7-12).

Regarding claim 18, Maddocks further teaches that the network element comprises a repeater (column 2, lines 19-24).

Regarding claim 19, Maddocks further teaches that at least one gain element comprises at least one of an optical amplifier and a pump source (the drawing, amplifier 8).

Regarding claim 20, Maddocks teaches that in a lightwave communication system (the drawing) having a plurality of network elements (the drawing, elements 1, 2, 8, 11, 21 and 22) for supplying an optical signal adapted for transmission in an optical fiber path (the drawing, optical fiber 6), an apparatus for controlling power of an optical signal (for example, Laser Control 22) propagating in the optical fiber path comprising: means for detecting loss of a supervisory signal (the drawing, element 21) counter-propagating in a optical fiber path (for example, the supervisory signal that counter-propagates in optical fiber 6); and a first automatic power reduction circuit (for example, Laser Control 22) for reducing the power level of an optical signal output from a first network element (the drawing, unit 2) by a predetermined amount in response to the loss of the supervisory signal (signal generated by supervisory insert 16).

Regarding claim 21, Maddocks further teaches means for detecting loss of the optical signal propagating in the optical fiber path; and a second automatic power reduction circuit (for example, Laser Control 21) for reducing counter-propagating optical power (signal propagating in optical fiber 5) output from a second network element (the drawing, unit 1) by a predetermined amount in response to the loss of the optical signal (column 2, lines 63-67 and column 3, lines 1-5).

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rowley et al. (U.S. Patent US 4,833,668) teaches a bi-directional optical communication system in which the supervisory signal is counter-propagating with respect to the optical signal in the same optical fiber for the signal transmission.

Czarnocha et al. (U.S. Patent US 6,504,630 B1) teaches an automatic power shut-down arrangement for optical line system.

Casanova et al. (U.S. Patent US 6,583,899 B1) discloses an automatic protection system for an optical transmission system.

Arnold (U.S. Patent Application Publication US 2004/0052524 A1) discloses a method of power control in an optical communication system.

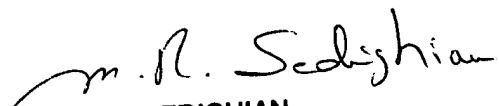
Boden (U.S. Patent Application Publication US 2003/0020994 A1) discloses an optical system transmitting information bi-directionally in a single optical fiber to suppress the cross talk between channels.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan-Zhen Wang whose telephone number is (571) 272-3114. The examiner can normally be reached on 9:00 AM - 5:00 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

qzw


M. R. SEDIGHIAN
PRIMARY EXAMINER